When rubella occurs in a pregnant woman it can result in fetal death, premature delivery, or a constellation of birth defects known as congenital rubella syndrome (CRS). Rubella and CRS have been nearly eliminated in the United States. However, most crew members on cruise ships which dock at US ports are from developing countries which do not routinely vaccinate against rubella. Rubella outbreaks have occurred among crew members, potentially putting at risk pregnant crew members and passengers.
OBJECTIVE: To compare the costs of two interventions: screen all crew members and vaccinate those found to be susceptible to rubella versus vaccinate all crew members.
METHODS: A decision tree was created to compare the two options. We used estimates of US private sector costs for MMR vaccine, screening tests and costs of treating adverse reactions. Data on susceptibility rates, and the probabilities of adverse events were used in the model.
RESULTS: The model showed that it would cost $28 per crew member to screen first and then vaccinate susceptible crew members versus $27 per crew member to vaccinate all crew members without screening. The three most important variables in this analysis were the cost of the vaccine, the cost of the screening test, and the rubella susceptibility rate of the crew members.
CONCLUSION: Using US costs, it is cheaper for cruise lines to vaccinate all employees, rather than screen and vaccinate only those who are susceptible. This model can be modified for different cruise lines with specific susceptibility rates and for vaccines which cruise lines may consider administering to employees, such as varicella and influenza vaccines.

COMPLIANCE PROGRAMS

TPCP1

THE ROLE OF COMPLIANCE IN THERAPY CHANGES AMONG NEWLY DIAGNOSED DIABETIC PATIENTS

Cox ER[1], Okamoto LJ[2]
[1]University of Arizona, College of Pharmacy, Tucson, AZ, USA; [2]NDC Health Information Services, Phoenix, AZ, USA

Therapy compliance is critical to the successful control of diabetes. Poor control of diabetes often results in changes in therapy, including switching to another agent or addition of concomitant therapy.
OBJECTIVE: The primary purpose of this study was to determine whether compliance influenced the likelihood of changes in diabetic therapy among newly diagnosed diabetic patients.
METHODS: Pharmacy claims data were used to identify newly diagnosed diabetic patients and evaluate compliance from January 1995 through June 1997. Newly diagnosed diabetics were identified as those having a prescription claim for an oral hypoglycemic agent in January 1996 with no diabetic claim in the previous 12 months. Switching was identified as change to another oral hypoglycemic agent. Concomitant was defined as those patients who had additional therapy added to their monotherapy regimen. Cox proportional hazards was used to estimate the influence of compliance on the likelihood of changes in therapy controlling for patient age, gender, and oral hypoglycemic agent.
RESULTS: The results suggest that those patients who are more compliant are more likely to have concomitant therapy added to their regimen (OR = 1.69; 95% CI 1.60–1.79) compared to those least compliant. The opposite relationship was found for switching where those most compliant were 22–38% less likely to switch therapy compared to the least compliant group.
CONCLUSIONS: Compliance does play a role in changes to therapy among diabetic patients. Disease severity may play a role in explaining the results found. For those patients who had additional therapy added to their regimen, it appears that in spite of their good compliance, their disease was not being controlled appropriately resulting in the addition of concomitant therapy.

TPCP2

PERCENTAGE OF ANTI-HYPERTENSIVE DRUGS "FILLED AS INTENDED" COMPARING PHARMACY CLAIMS AND MEDICAL RECORDS DATA

Connors H, Cleary M, Clouse J
Ingenix, Minneapolis, MN, USA

OBJECTIVE: The aim of this study was to determine the percentage of anti-hypertensive drugs documented in medical records that appeared in managed care pharmacy claims.
METHODS: Study subjects were incident hypertensive patients identified by: 1) at least one claim with an ICD-9 diagnosis code of hypertension and at least one claim for an anti-hypertensive drug; or 2) at least two claims with an ICD-9 diagnosis code of hypertension, preceded by a 6-month treatment-free period. Nurse abstractors reviewed medical records for newly initiated or continuing anti-hypertensive drugs (ACE inhibitors, angiotensin II receptor blockers, beta-blockers, calcium channel blockers, and diuretics). To determine whether these drugs were filled, we reviewed pharmacy claims for a 12-month period after the subject's initial anti-hypertensive drug claim. Drugs were "filled as intended" if a pharmacy claim for the same drug was identified, and filled within 7 days prior to, or 30 days after, the date of the notation in medical records.
RESULTS: Medical records were abstracted for 563 patients, with 2205 notations of newly initiated or continuing anti-hypertensive drugs. Of these, 1209 (54.8%) pharmacy claims had fill dates that appeared to have been "filled as intended." The median "days supplied" for these fills was 30 days, with a mode of 30 days.
CONCLUSION: In this population, 54.8% of anti-hypertensive drugs noted in medical records appeared to have been "filled as intended" based on pharmacy claims data. Given a median of 30 "days supplied" for anti-hyperten-